DOCKET NO: 218222US0PCT

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF	:
TAKESHI MIYAKAWA, ET AL.	: EXAMINER: CHEVALIER, ALICIA A.
SERIAL NO: 10/030,160	: GROUP ART UNIT: 1772
FILED: JANUARY 30, 2002	: RCE FILED: OCTOBER 27, 2004
FOR: SHEET FOR EMBOSSED CARRIER TAPE	:

REPLY BRIEF

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

SIR:

This is in response to the Examiner's Answer dated May 4, 2007.

I. Cited references fail to suggest independent Claims 10 and 15

The Examiner's Answer asserts:

> First, Appellant has failed to specifically point out how the references fail to disclose an "embossed carrier tape comprising a sheet having at least one embossed pocket". Examiner's Answer at page 8, lines 13-14; page 11, lines 18-19.

However, Appellants have not argued that the cited prior art fails to disclose an "embossed carrier tape comprising a sheet having at least one embossed pocket".

Instead, the Appeal Brief at, e.g., pages 6-7 and 12, points out that Schenz in view of Maeda, and Schenz in view of Miyamoto, both fail to suggest the limitation of independent Claims 10 and 15 of an "embossed **carrier tape** comprising a sheet having at least one embossed pocket, wherein the sheet ... has a **tear strength** of at least 105 N/mm as defined in Japanese Industrial Standard K-7128-3".

The Examiner's Answer also asserts:

> Second, in response to Appellant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Examiner's Answer at page 8, lines 16-18; page 11, line 21 to page 12, line 1.

However, the Appeal Brief shows that the combination of references fails to suggest all of the limitations of independent Claims 10 and 15. Furthermore, the Appeal Brief does not argue that there is no motivation to combine the references.

II. Cover tape is not carrier tape

The Examiner's Answer states:

> Third, Examiner has already noted that Maeda is disclosing a cover for a carrier tape and Schenz is disclosing a carrier tape, however, they are both trying to solve a similar problem. They are both trying to reduce static in electronic packaging. Examiner's Answer at page 10, lines 9-11.

> Third, the Examiner has already noted that Miyamoto is disclosing a cover for a carrier tape and Schenz is disclosing a carrier tape, however, they are both trying to solve a similar problem. They are both trying to improve materials used in electronic packaging. In conclusion Appellant's arguments are moot since they fail to show why one of ordinary skill in the art would not look to a cover sheet for an embossed carrier tape to improve the properties (sic) of the carrier tape. Examiner's Answer at page 12, lines 1-6.

The Examiner's Answer confuses apples with oranges. Different packaging elements are designed for different purposes. A carrier tape is designed to be pulled from a reel by a drive sprocket (e.g, drive sprocket 5, Appeal Brief at page 5, Fig. 4). A cover tape is designed to hold electronic components in embossed pockets in a carrier tape until the cover tape is peeled away from the carrier tape. The force applied by a drive sprocket to pull a carrier tape from a reel is completely different than the force applied to peel a cover tape from a carrier tape. Because a cover tape and a carrier tape are designed for different purposes, the properties of a cover tape do not suggest the properties of a carrier tape.

III. Carrier tape with sheet having tear strength of at least 105 N/mm is not inherent or result effective variable

The Examiner's answer asserts:

> Fourth, Appellant has not addressed the Examiner's basis for rejection of the limitation "tear strength of at least 105 N/mm as defined in Japanese Industrial Standard K-7128-3," that is the limitation is either a latent property, i.e., **inherent, or** alternatively that the exact tear strength of the carrier tape is deemed to be a **result effective variable** with regard to the peeling the cover tape off and would require routine experimentation to determine the optimum value. In conclusion, Appellant's arguments are moot since they fail to address the Examiner's basis for rejection the limitation. Examiner's Answer page 8, line 21 to page 9, line 6 (emphasis added).

> Second, Maeda desires a cover tape with improved tear resistance (*col. 4, lines 67-68*) and preventing troubles due to static electricity (*col. 4, lines 32-45*). Therefore, the Examiner maintains that the exact tear strength of the carrier tape is deemed to be a **result effective variable** with regard to the peeling the cover tape off and would require routine experimentation to determine the optimum value. Examiner's Answer at page 10, lines 4-8 (italics in original, bold emphasis added).

However, the Appeal Brief shows that the limitation of Claims 10 and 15 of a "embossed **carrier tape** comprising a sheet having at least one embossed pocket, wherein the sheet ... has a **tear strength** of at least 105 N/mm as defined in Japanese Industrial Standard K-7128-3" is not inherent (i.e., necessarily present) in the cited prior art. The Appeal Brief at page 9, Table A, and page 10, lines 1-12, presents experimental data showing "that carrier tapes with similar compositions and thicknesses can have quite different breakage characteristics and that, with carrier tape composition and thickness essentially constant, a decrease in carrier tape breakage can be achieved by increasing tear strength to at least 105 N/mm". This establishes that the limitation of Claims 10 and 15 of a "embossed **carrier tape** comprising a sheet having at least one embossed pocket, wherein the sheet ... has a **tear strength** of at least 105 N/mm as defined in Japanese Industrial Standard K-7128-3" is not inherent (i.e., necessarily present) in the cited prior art, which is silent about carrier tape tear strength (N/mm).

The Appeal Brief also indicates that there is no recognition in the cited prior art that carrier tape tear strength (N/mm) is recognized as a result effective variable. The Appeal Brief discusses how:

"Schenz is silent about the tear strength of ***carrier tape***" (Appeal Brief at page 6, line 13; page 8, line 8);

"Maeda is concerned with the **peel-off strength** (in grams force per mm of sealing width) ***between*** the **cover tape** and the **carrier tape**", but is "silent about the **tear strength** (in N/mm) ***of*** the **carrier tape**" (Appeal Brief at page 7, lines 27-29); and

"Miyamoto discloses a ***cover tape*** having an outer layer, an intermediate layer and an adhesive layer, where the intermediate layer has a tear strength (JIS K-7128) of at least 100 kg/cm", but that "a ***cover tape*** is not a ***carrier tape***"(Appeal Brief at page 12, lines 16-19).

Nowhere does the cited prior art indicate that **carrier tape tear strength (N/mm)** is a variable which achieves a recognized result (i.e., is a result-effective variable).

> A particular parameter **must *first*** be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. MPEP 2144.05.II.B. (emphasis added).

The Examiner's Answer cites no reference indicating that the tear strength (N/mm) of carrier tape achieves a recognized result.

As noted above, the Examiner's Answer states:

> ...[T]he exact **tear strength of the *carrier tape*** is deemed to be a **result effective variable** with regard to the **peeling the *cover tape* off** and would require routine experimentation to determine the optimum value. Examiner's Answer page 8, line 21 to page 9, line 6 (emphasis added).

Thus, the Examiner's Answer somehow extrapolates from Maeda's disclosure about the ***peel-off strength*** (in grams force per mm of sealing width) ***between*** the **cover tape** and the **carrier tape** to a ***tear strength*** (N/mm) of a **carrier tape** itself. In addition, the

Examiner's Answer somehow extrapolates from Miyamoto's disclosure of the tear strength (kg/cm) of **cover tape** to a tear strength (N/mm) of **carrier tape**.

However, the Examiner's Answer has not shown that carrier tape tear strength (N/mm) is a result effective variable.

Appellants were the first to discover that if tear strength is less than 105 N/mm, then carrier tape is likely to break. Specification at page 2, lines 11-15.

Because the cited prior art fails to suggest (expressly or inherently) the limitation of independent Claims 10 and 15 of a "embossed **carrier tape** comprising a sheet having at least one embossed pocket, wherein the sheet ... has a **tear strength** of at least 105 N/mm as defined in Japanese Industrial Standard K-7128-3", and there is no evidence of record establishing that carrier tape tear strength (N/mm) is a result effective variable, Claims 10 and 15 are not obvious over the cited prior art.

IV. Machine translation of Miyamoto

The Examiner's Answer relies upon portions of a machine translation of Miyamoto in support of the Final Rejection. However, the machine translation is not an accurate translation of Miyamoto and is not prior art to the above-identified application. Appellants respectfully request that the Board of Patent Appeals and Interferences disregard the machine translation and instead rely upon the English-language translation of Miyamoto that was filed August 3, 2004, and with the Appeal Brief.

V. Conclusion

For the reasons discussed above and in the Appeal Brief, Appellants respectfully request that the Final Rejection of Claims 10-15 be REVERSED.

Respectfully submitted,

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